

WHAT IS CLAIMED IS:

1 1. A method for processing a job, comprising;
2 generating a signal when status for the job is changed from a first status to a
3 second status;
4 notifying a work process associated with the second status that one job had its
5 status changed to the second status in response to the signal;
6 processing, with the work process, the job that had its status changed from the
7 first status to the second status; and
8 modifying, with the work process, the status of the job after completing the
9 processing of the job.

1 2. The method of claim 1, wherein the signal is transmitted to a routing
2 process and indicates the second status, further comprising:
3 processing with the routing process a mapping associating each status with
4 one work process in response to receiving the signal; and
5 determining from the mapping one work process associated with the second
6 status, wherein the determined work process is notified of the job.

1 3. The method of claim 1, wherein job status is maintained in a database
2 table including information on the job, further comprising maintaining, with the work
3 process, a connection with the database that enables communication with the database
4 table, wherein modifying the status of the job after completing processing comprises
5 updating the status of the job to an output status associated with another work
6 process, and wherein updating the status with the output status generates the signal
7 indicating a change in status.

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1 4. The method of claim 3, wherein the signal is generated by an event
2 trigger in the database that responds to an update to the status of the job in the
3 database table.

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1 5. The method of claim 3, wherein there are multiple work processes
2 each associated with one input status and at least one output status, wherein each
3 ~~worker is enabled to update the job status with one associated output status after~~
4 ~~completing the processing of the job, wherein the output status for one worker is the~~
5 ~~input status associated with one other worker, and wherein the definition of input and~~
6 ~~output statuses for workers defines the workflow of the job.~~

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1 6. The method of claim 3, further comprising the work process
2 performing:
3 determining whether the work process completed processing the job
4 successfully; and
5 updating the status of the job to an error status if the work process did not
6 complete processing the job successfully, wherein the status of the job is updated with
7 one output status associated with the work process if the job work process completed
8 processing the job successfully.

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1 7. The method of claim 6, wherein an error worker is associated with the
2 error status, ~~wherein updating the job to the error status causes the notification of the~~
3 ~~error worker, further comprising the error worker performing:~~
4 performing error recovery operations on the job;
5 determining whether the error recovery operations corrected the job; and
6 setting the jobs status of the corrected job to a first possible status in the
7 workflow.

1 8. The method of claim 3, wherein the work process further performs:
2 querying the database table for jobs having the status associated with the work
3 process;
4 processing the job having the status associated with the work process;
5 terminating processing of the database table if there are no further jobs in the
6 database table having the status associated with the work process; and
7 querying the database table for jobs after receiving the notification.

1 9. The method of claim 8, wherein the work process spawns a work
2 thread to process one job in the database table having the status associated with the
3 work process, wherein the work process is capable of spawning multiple work threads
4 to process different jobs having the status associated with the work process.

1 10. The method of claim 1, wherein the job comprises a data file, wherein
2 at least one work process processes the data file to alter its format and at least one
3 other work process processes the data file in the altered format to transmit the work
4 process to an output device.

1 11. The method of claim 10, wherein at least two workers process the job
2 ~~at different devices in communication over a network, further comprising accessing~~
3 the job from another device over the network to process the job at the device on
4 which that worker executes.

1 12. The method of claim 1, further comprising:
2 adding a status update to a list providing status updates for each job; and
3 using the list to determine how the job has been processed by the work
4 processes.

1 13. A system for processing a job, comprising;
2 means for generating a signal when status for the job is changed from a first
3 status to a second status;
4 means for notifying a work process associated with the second status that one
5 job had its status changed to the second status in response to the signal;
6 means for processing, with the work process, the job that had its status
7 changed from the first status to the second status; and
8 means for modifying, with the work process, the status of the job after
9 completing the processing of the job.

1 14. The system of claim 13, wherein the signal is transmitted to a routing
2 process and indicates the second status, further comprising:
3 means for processing with the routing process a mapping associating each
4 status with one work process in response to receiving the signal; and
5 mean for determining from the mapping one work process associated with the
6 second status, wherein the determined work process is notified of the job.

1 15. The system of claim 13, wherein job status is maintained in a database
2 table including information on the job, further comprising means for maintaining,
3 with the work process, a connection with the database that enables communication
4 with the database table, wherein the means for modifying the status of the job after
5 completing processing comprises updating the status of the job to an output status
6 associated with another work process, and wherein the means for updating the status
7 with the output status generates the signal indicating a change in status.

1 16. The system of claim 15, wherein the signal is generated by an event
2 trigger in the database that responds to an update to the status of the job in the
3 database table.

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1 16. The system of claim 15, wherein there are multiple work processes
2 each associated with one input status and at least one output status, wherein each
3 worker is enabled to update the job status with one associated output status after
4 completing the processing of the job, wherein the output status for one worker is the
5 input status associated with one other worker, and wherein the definition of input and
6 output statuses for workers defines the workflow of the job.

1 17. The system of claim 15, further comprising:
2 means for determining whether the work process completed processing the job
3 successfully; and
4 means for updating the status of the job to an error status if the work process
5 did not complete processing the job successfully, wherein the status of the job is
6 updated with one output status associated with the work process if the job work
7 process completed processing the job successfully.

1 18. The system of claim 17, wherein an error worker is associated with the
2 error status, wherein updating the job to the error status causes the notification of the
3 error worker, further comprising:
4 means for performing error recovery operations on the job;
5 means for determining whether the error recovery operations corrected the job;
6 and
7 means for setting the jobs status of the corrected job to a first possible status in
8 the workflow.

1 19. The system of claim 15, further comprising:
2 means for querying the database table for jobs having the status associated
3 with the work process;

4 means for processing the job having the status associated with the work
5 process;
6 means for ~~terminating processing~~ of the database table if there are no further
7 jobs in the database table having the status associated with the ~~work process~~; and
8 means for querying the database table for jobs after receiving the notification.

1 20. The system of claim 19, wherein the work process spawns a work
2 thread to process one job in the database table having the status associated with the
3 work process, and wherein the work process is capable of spawning multiple work
4 threads to process different jobs having the status associated with the work process.

1 21. The system of claim 13, wherein the job comprises a data file, wherein
2 at least one work process processes the data file to alter its format and at least one
3 other work process processes the data file in the altered format to transmit the work
4 process to an output device.

1 22. The system of claim 21, wherein at least two workers process the job
2 at different devices in communication over a network, further comprising means for
3 accessing the job from another device over the network to process the job at the
4 device on which that worker executes.

1 23. The system of claim 13, further comprising:
2 means for adding a status update to a list providing status updates for each job;
3 and
4 means for using the list to determine how the job has been processed by the
5 work processes.

1 24. An article of manufacture for processing a job, the article of
2 manufacture comprising computer usable media including at least one computer
3 program and at least one work process embedded therein that causes at least one
4 computer to perform:
5 generating a signal when status for the job is changed from a first status to a
6 second status;
7 notifying a work process associated with the second status that one job had its
8 status changed to the second status in response to the signal;
9 processing, with the work process, the job that had its status changed from the
10 first status to the second status; and
11 modifying, with the work process, the status of the job after completing the
12 processing of the job.

1 25. The article of manufacture of claim 24, wherein the signal is
2 transmitted to a routing process and indicates the second status, further comprising:
3 processing with the routing process a mapping associating each status with
4 one work process in response to receiving the signal; and
5 determining from the mapping one work process associated with the second
6 status, wherein the determined work process is notified of the job.

1 26. The article of manufacture of claim 24, wherein job status is
2 maintained in a database table including information on the job, further comprising
3 maintaining, with the work process, a connection with the database that enables
4 communication with the database table, wherein modifying the status of the job after
5 completing processing comprises updating the status of the job to an output status
6 associated with another work process, and wherein updating the status with the output
7 status generates the signal indicating a change in status.

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1 30. The article of manufacture of claim 29, wherein one worker process is
2 an error worker is associated with the error status, wherein updating the job to the
3 error status causes the notification of the error worker, further comprising the error
4 worker performing:
5 performing error recovery operations on the job;
6 determining whether the error recovery operations corrected the job; and
7 setting the jobs status of the corrected job to a first possible status in the
8 workflow.

32. The article of manufacture of claim 31, wherein the work process spawns a work thread to process one job in the database table having the status associated with the work process, wherein the work process is capable of spawning multiple work threads to process different jobs having the status associated with the work process.

33. The article of manufacture of claim 24, wherein the job comprises a data file, wherein at least one work process processes the data file to alter its format and at least one other work process processes the data file in the altered format to transmit the work process to an output device.

34. The article of manufacture of claim 33, wherein at least two workers process the job at different devices in communication over a network, further comprising accessing the job from another device over the network to process the job at the device on which that worker executes.

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- 1 35. The article of manufacture of claim 24, further comprising:
 - 2 ~~adding a status update to a list providing status updates for each job; and~~
 - 3 ~~using the list to determine how the job has been processed by the work~~
 - 4 processes.